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 NEWSPAPERS IN EDUCATION  
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EDUCATION ■ COMMUNITY ■ FAMILY

OCTOBER 21, 2011



# Underaged**drinking**



## Dislike Underage Drinking

With millions of teens now running their social lives through cell phone texts and sites like Facebook, it's more important than ever that parents stay digitally connected. Monitor your child's online activity for signs of underage drinking. Learn how on the pages inside, or by visiting **ParentsEmpowered.org**.

Deseret News

The Salt Lake Tribune



**PARENTS  
EMPOWERED.org**  
Eliminating Underage Drinking in Utah



STATE OF UTAH  
OFFICE OF THE GOVERNOR  
SALT LAKE CITY, UTAH  
84114-2220

GARY R. HERBERT  
GOVERNOR

GREG BELL  
LIEUTENANT GOVERNOR

Dear Parents,

As parents we all want the best for our children.

We are becoming increasingly aware of the disturbing fact that underage drinking is a serious problem, even here in Utah. Heavy binge drinking begins as early as sixth grade, and new scientific evidence proves underage drinking can cause permanent damage to a teen's developing brain. As a result, the need for parents to stay involved in their children's lives has never been greater.

In an effort to combat this growing problem, the State of Utah has launched ParentsEmpowered.org, a program designed to educate parents about the dangers of underage drinking. Featured on ParentsEmpowered.org are downloadable resources that teach parents important skills in the following areas:

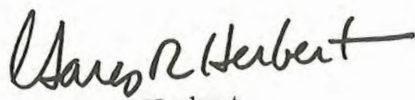
- Bonding with your children through daily, positive communication and interaction.
- Setting clear boundaries and limitations, including rules about underage drinking.
- Monitoring your children's activities by asking direct questions and ensuring that their environment is alcohol-free.

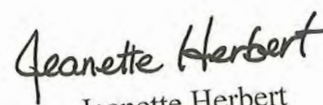
ParentsEmpowered.org can help you discover that you have more power over the choices your children make than you may now realize.

Studies confirm that children who have a close and loving relationship with their parents are less likely to use alcohol, drugs or tobacco. Children who feel connected to their families value that relationship and do not want to jeopardize it. In fact, studies show that parental disapproval is the No. 1 reason children choose not to drink alcohol.

We encourage you to visit ParentsEmpowered.org today and get started on the road to keeping the children in our State drug and alcohol-free.

Sincerely,

  
Gary R. Herbert  
Governor

  
Jeanette Herbert  
First Lady

**PARENTS  
EMPOWERED.org**  
Eliminating Underage Drinking in Utah



- Most parents talk to their kids about drinking two years too late. Age 8 is not too early.

- What parents may not realize is that children say parental disapproval of underage drinking is the key reason they have chosen not to drink.



# Teen brain development and alcohol

**N**EW RESEARCH SHOWS that alcohol affects a developing teen brain differently than an adult brain. "The brain goes through dynamic changes during adolescence, and alcohol can seriously damage long- and short-term growth processes" (American Medical Association, 2003).

Alcohol use may impair memory, learning, decision-making and impulse control; and it greatly increases the risk of addiction. In addition, alcohol use can cause young people to develop social problems, have poor judgment, get into trouble, do poorly in school and experience failure in achieving lifelong goals.

To compound this problem, research shows that parents generally underestimate the extent of teen drinking and its negative consequences. Thirty-one percent of youths who said they had been drunk in the past year were said by their parents to be non-drinkers. Others may view underage drinking as inevitable, but it isn't. To be alcohol-free, a teen needs the active involvement and help of a parent. All children need help from their parents to guide them through their teenage years. Staying bonded to parents is critical to the process of teenagers emerging healthy, safe and alcohol-free.

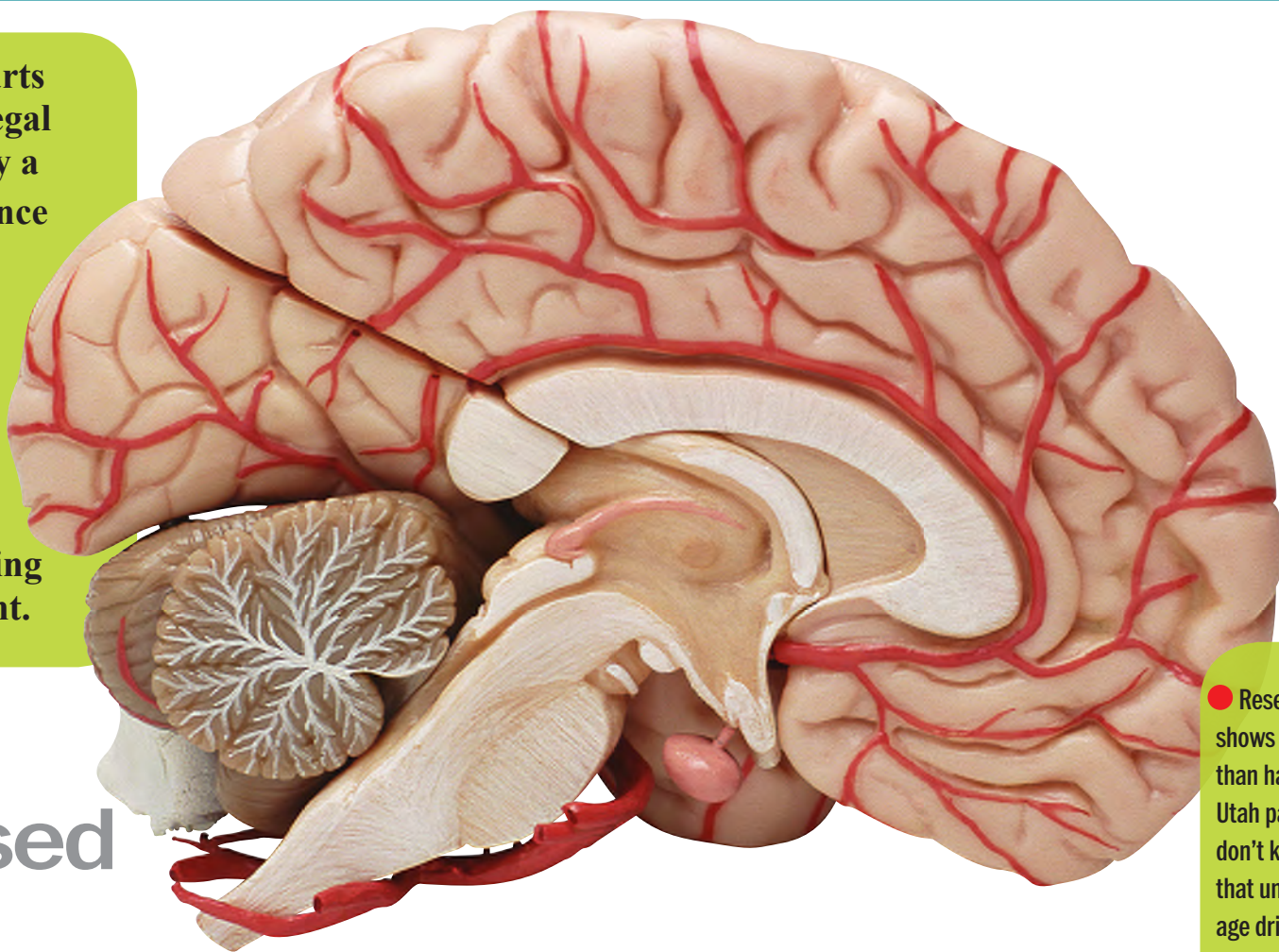
Alcohol affects a teen brain differently than an adult brain.

- The brain's hippocampus (responsible for learning and memory) can be **10% smaller** in underage drinkers.
- It can actually cause serious damage to the still-developing adolescent brain (10-21 years).



A person who starts drinking at the legal age of 21 has only a **7 percent** chance of becoming addicted.

Children who begin drinking at age 13 have a **45 percent** chance of becoming alcohol-dependent.



● Research shows more than half of Utah parents don't know that underage drinking increases the risk of alcoholism.

Increased risk of

# addiction

## ALCOHOL HIJACKS THE BRAIN'S PLEASURE-REWARD SYSTEM

**T**HE BRAIN REWARDS positive actions with feelings of pleasure so we want to repeat them. We remember pleasure “feel-good” brain chemicals, or neurotransmitters, which connect the pleasure to the thing we enjoyed. Alcohol hijacks our brain's pleasure-reward system by tricking the brain into generating pleasure-reward feelings from a harmful chemical instead of a real experience.

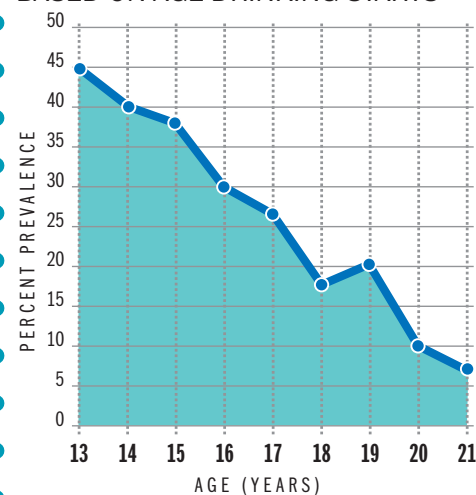
If teens continue drinking, the brain changes and adapts to the presence of alcohol and soon they need more and more alcohol to create the same amount of pleasure. If they continue to drink they

will begin to crave it and feel uncomfortable — sometimes even extreme discomfort — without it. They become addicted. Getting their next drink becomes more important than family, grades or even sports.

Because the teen brain produces an abundance of dopamine, it can go rapidly from liking, to wanting, to needing alcohol, programming it for alcoholism. Alcohol can also damage the brain's ability to sense pleasure from normal, healthy things and experiences — leaving a young person feeling “flat” about things he/she previously enjoyed.

## Alcohol-dependence

BASED ON AGE DRINKING STARTS



SOURCE: Grant, BF and Dawson, DA.  
Journal of Substance Abuse 9:103-110, 1997

● If your family has a history of alcoholism, your children need to know that they are at a greater risk for problem drinking.



# Parents

## are the #1 reason kids don't drink

**E**ducation alone is not enough to deter teens from drinking as they enter difficult social transitions to adulthood, because there are many pressures and opportunities to drink. Parents who are actively involved can have a powerful influence on their child's decision to remain alcohol-free.

Teen perceptions of parental disapproval are great deterrents. What parents may not realize is that children say parental disapproval of underage drinking is the key reason they have chosen not to drink.

Research indicates that children are less likely to drink when their parents are involved in their lives and when they and their parents report feeling close to each other. Family conflict and lack of bonding are associated with an increased risk of drinking. Mixed messages, and unclear rules and expectations also leave children more vulnerable to underage drinking.



### How parents can help their children remain ALCOHOL-FREE

#### 1 Explain the risks

Learn and explain the risks of underage drinking. Emphasize that drinking alcohol is not a "rite of passage" but a dangerous drug for a teen brain.

#### 2 Talk early and often

In Utah, surveys indicate some youths binge drink in the sixth grade, and a few may start even earlier.

#### 3 Set clear rules

Set clear rules about no alcohol use. Be specific: "Absolutely no underage drinking in our family."

#### 4 Know your children's friends

Get to know your children's friends and their parents. Help them choose friends who support your family rules.

#### 5 Monitor children's activities

Always know where your children are, whom they are with and what they are doing. For example: "If alcohol is at a party, call me and I'll come and get you."

#### 6 Make alcohol unavailable

Ensure that alcohol is not available to your child at home or from others when your child is away. Ensure that your children's social environment is alcohol-free.

#### 7 Be involved

Develop close bonding experiences and have daily positive interactions with your child. Express love often.

#### 8 Stay in contact

Studies show children are more likely to drink between the hours of 3:00–6:00 pm, when unsupervised by parents. Give your kids a call.

#### Eat dinner together

Studies show that kids who eat dinner with their family 5-7 times per week are 33 percent less likely to drink alcohol underage.

### START TALKING BEFORE THEY START DRINKING

Sharing values and family history regarding alcohol will create an environment of trust and understanding.

#### If parents drink, they should:

*Be clear that they do not want their children to drink alcohol until they are 21 years old and then only in moderation.*

*Tell their children that some people should not drink alcohol beverages at all. These include:*

- Children and adolescents.
- Individuals of any age who cannot restrict their drinking to moderate levels.
- Women who are pregnant.
- People who plan to drive or take part in activities that require attention or skill.
- People using prescription and over-the-counter medications.

#### If parents don't drink, they should:

*Explain their reasons for not drinking, whether they are religious, health-related or due to family history.*

- Encourage children to talk about concerns and questions about drinking.
- Be clear that they do not want their children to drink.
- Explain that when their children are 21, if they should decide to drink, they should do so in moderation.

# New brain res

## and the effects of alcohol

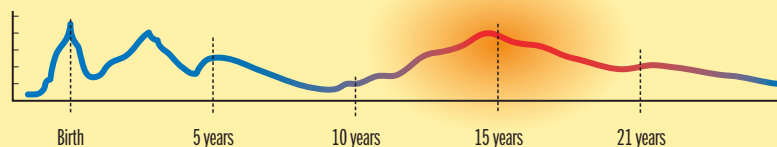
### Brain plasticity

During peaks of plasticity, the adolescent brain is “wiring” two important brain areas: the **prefrontal cortex** (responsible for planning, decision-making, good judgment and impulse control) and the **hippocampus** (involved in memory and learning). During this period of development, the brain must make the key neural connections to wire itself to become a responsible, thoughtful adult. Alcohol, which acts as a depressant, slows down brain activity and hinders development.

*Neural plasticity refers to the ability of circuitry in the brain to physically change and grow new dendrites as a result of new learning and experiences.*

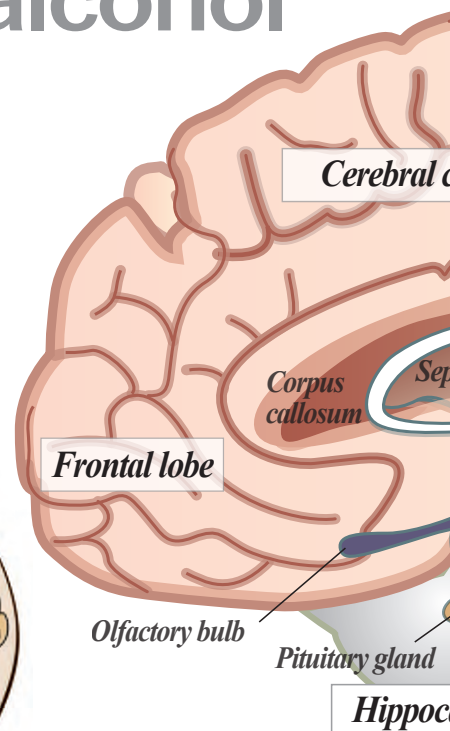
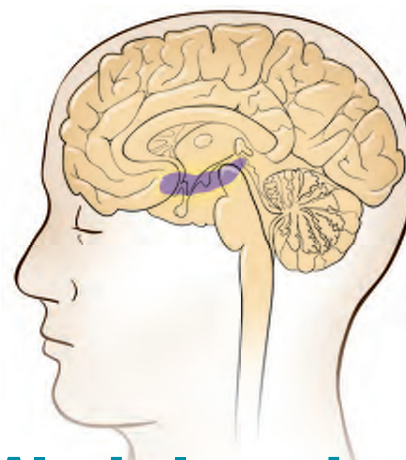
### Peaks of brain plasticity

*Drinking alcohol during times of peak plasticity can damage brain wiring.*



**A**lcohol affects a teen brain differently than a mature adult brain. The brain goes through rapid development and “wiring” changes during the ages of 12 through the early 20s. Teen alcohol use can damage this brain wiring, which is essential to become a mature, thoughtful, responsible adult.

The brain's **hippocampus** (responsible for learning and memory) can be **10% smaller** in underage drinkers.



### Alcohol can damage two key brain areas

**1** “The **prefrontal** area (responsible for thinking, planning, good judgment, decision-making and impulse control) undergoes the most change during adolescence. Researchers found that adolescent drinking could cause severe changes in this area...which plays an important role in forming adult personality and behavior. Damage from alcohol at this time can be long-term and irreversible.”

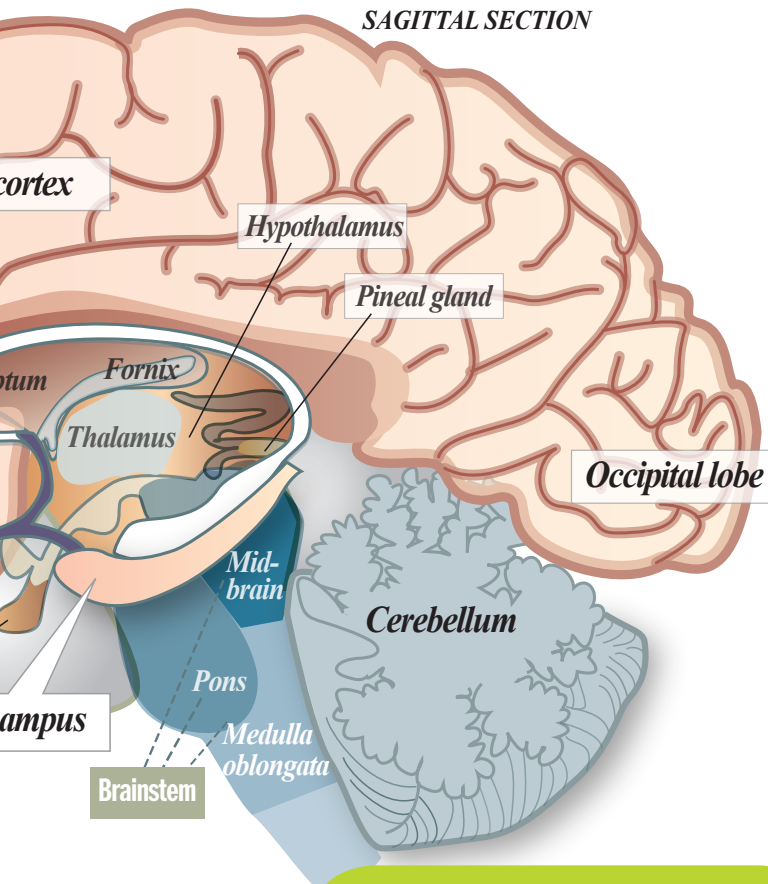
**2** “The **hippocampus** (responsible for learning and memory) is also affected by alcohol-related brain changes. Those who had been drinking and for longer had smaller hippocampi (10 percent smaller than adults). Frequent drinking can be able to catch up on new information, but alcohol inhibits systems for learning new information.”

American Medical Association



# Search

SAGITTAL SECTION



## Brain areas:

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systems crucial for stor-  
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Association, 2003 Fact Sheet

## About the brain

The **brain** is the major organ of the central nervous system and the control center for all the body's voluntary and involuntary activities. It is responsible for everything we think, feel, see, say and do.

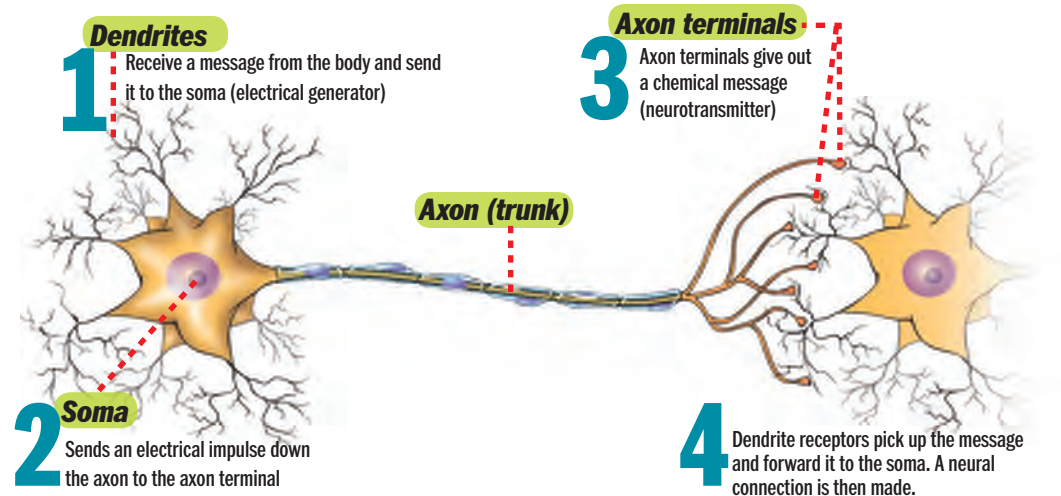
The **brainstem** controls vital body functions, such as breathing and digestion. The **cerebellum's** main functions are the maintenance of posture and the coordination of body movements. The **cerebrum**, which consists of the right and left cerebral hemispheres, is the site of most conscious and intelligent activities.

## Brain white matter damage

The brain is made up of gray matter (neurons) and white matter. Because alcohol suppresses brain activity, it prevents the teen brain from properly developing its essential “white matter” — the fatty-waxy coating which insulates the part of neurons that send electrical signals. Impaired white matter can negatively affect thinking and memory skills. — Dr. Susan Tapert

(ref: <http://www.npr.org/templates/story/story.php?storyId=122765890>)

## How neurons communicate



Our brain is more complex than the world's most powerful computer. It is responsible for everything we think, see, hear, feel, smell or do. It even creates and directs all of our emotions. The brain is divided into different areas that direct different parts of our body. Like a complex computer, all the different parts of the brain work at the same time – like parallel processing.

It does this through more than 100 billion brain cells called neurons. A neuron looks sort of like a tree, with “branches” called dendrites, a “trunk” called an axon, and “roots” called axon terminals. The tip of each “root” contains tiny sacks of powerful chemicals called neurotransmitters. At the top of the “trunk” is a tiny electrical generator called a soma.

The brain neurons communicate by sending electrical and chemical messages from the “roots”

*“... it has become clear that, during adolescence... the brain is highly plastic and shaped by experience.... Alcohol appears to interfere with the changes in circuitry that occur during learning.”*

—Dr. Aaron White, Duke University

of one neuron to the “branches” of another. If a thought or action is repeated often, the “roots” of one neuron send more chemical, and the receiving neuron makes more “branches” to receive it. The neural connection is strengthened until it begins to look like a bushy tree instead of a spindly tree. It becomes a dominant neural pathway.

40 percent of our neurons are “wired” at birth. They perform automatic functions such as breathing, heart and lung functions, digestion, etc. The other 60 percent are waiting to be stimulated by our learning and experiences to make connections or “wiring.” When we learn new things, new “NEURAL CONNECTIONS” are made in our brain. This is referred to as “wiring” our brain. It is like loading new software into a computer so it can do more things. The more neural connections we make, the smarter and more capable we become. Alcohol suppresses brain development.

## Alcohol and judgment

*The teenage brain is still developing. Alcohol can impair the parts of the brain that control the following:*

### Motor coordination

This includes the ability to talk, drive and process information.

### Impulse control

Drinking lowers inhibitions and increases the chances that a person will do something they will regret when they are sober.

### Memory

Impaired recollection and even blackouts can occur when too much alcohol has been consumed.

### Judgment and decision-making capacity

Drinking may lead young people to engage in risky behaviors including getting into a car with someone who has been drinking. These behaviors can result in illness, injury and even death.

**Risks associated with underage**

# drinking

## ALCOHOL POISONING

Most kids have not yet developed the “cut-off” switch that makes them go to sleep or pass out from too much drinking. They can consume dangerous amounts of alcohol before they realize it’s too late. This can result in alcohol poisoning, which can cause difficulty breathing, unconsciousness and death. Binge drinking can and *does* kill – killing as many young people as all other drugs combined. If a young person ever passes out from drinking, 911 should be called for immediate medical attention.

**A**lcohol use among children is strongly correlated with violence, poor academic performance and other harmful behaviors. Education alone will not keep your kids from using alcohol because there are constant pressures and opportunities to drink.

Further, the areas of the brain that encourage impulsivity and risk-taking develop early in a teen, while the areas that improve self-control don’t develop until the very late teens or early twenties. You must stay actively involved as a parent in bonding with your teen, setting boundaries and monitoring to help your teen remain alcohol-free.

### Violence

Children who start drinking before age 15 are 12 times more likely to be injured while under the influence of alcohol and 10 times more likely to be in a fight after drinking, compared with those who wait to drink until they are 21.

### School failure

Teens who use alcohol have higher rates of academic problems and poor performance than non-drinkers. Among eighth graders, higher truancy rates are associated with greater rates of alcohol use.

### Promiscuity

Alcohol use by teens is a strong predictor of unprotected sexual activity and unwanted sexual advances.

### Illicit drug use

More than 67 percent of young people who start drinking before the age of 15 will try an illicit drug. Children who drink are 7.5 times more likely to use an illicit drug, more than 22 times likely to use marijuana and 50 times more likely to use cocaine than children who never drink.

## Stay in contact

Be aware that studies show kids are more at risk for alcohol between the hours of 3 p.m. and 6 p.m., while many parents are still at work.

Find ways to check on your kids when you are not around, either with phone calls, text messaging or through a neighbor dropping by.

Visit [ParentsEmpowered.org](http://ParentsEmpowered.org) to send a text message to your kids.







**Children often think that other people their age are drinking regularly, but most are not.**

# Peers'

## influence on alcohol use

**S**tudents with high-refusal-assertiveness skills are less likely to drink underage. Decide on good ways to say “no” and practice them often in role-play situations. Some ideas are:

- “No thanks. Drinking is not my thing.”
- “No thanks. I need all the brain cells I’ve got.”
- “No thanks. I’ve only got one brain. Why would I want to trash it?”
- “No thanks. Drinking before your brain is developed can dumb yourself down.”

**If there is alcohol at a party,  
LEAVE.**

**Keep your social environment  
alcohol-free.**

### The law

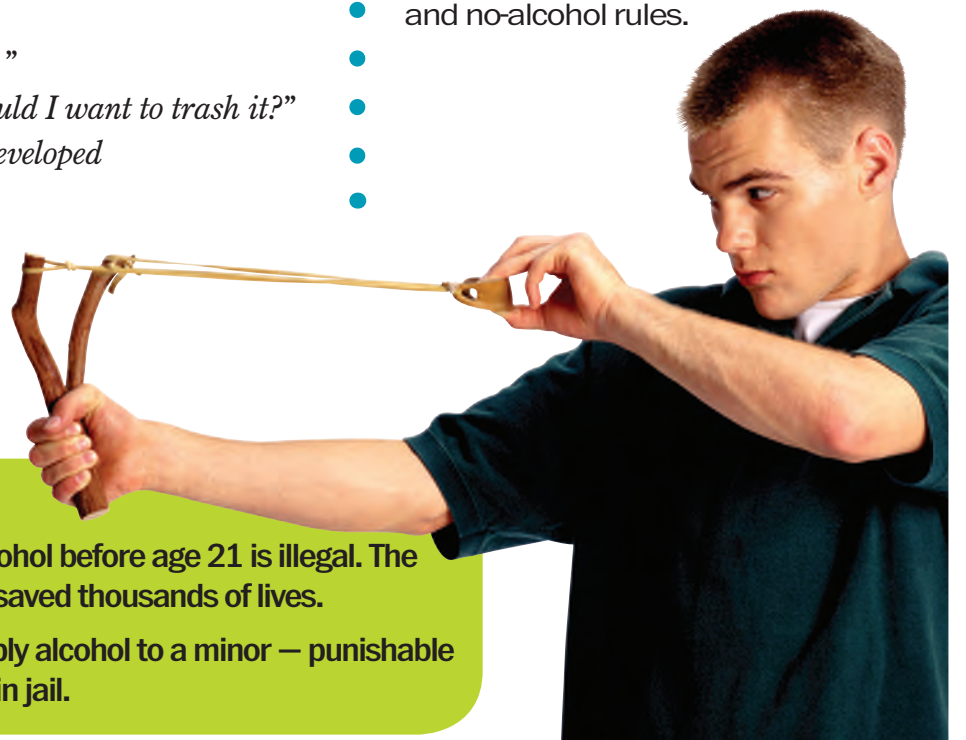
Possessing, purchasing or drinking alcohol before age 21 is illegal. The minimum legal drinking age of 21 has saved thousands of lives.

It is illegal for anyone to furnish or supply alcohol to a minor — punishable by up to a \$2,500 fine and 12 months in jail.

If your child’s friends drink, encourage them to stop. Salt Lake County provides a 24-hour parent help-line for youths who have substance abuse problems.

**In Salt Lake County,  
call 801-468-2009.**

The single most predictive risk for underage drinking is if your child’s peers drink. Encourage your kids to choose friends who support your family values and no-alcohol rules.



# Digital parenting

**I**f you really want to know what your kids are thinking, saying and doing, you need to spend more time in their world – and increasingly that world is online.

## Kids live in their own world. Are you in it?

- ▶ **New media means new risks.**
- ▶ **Establish a clear “online monitoring” rule.**
- ▶ **Kids who feel monitored are less likely to engage in risky behaviors.**

### How to monitor your children’s use of new media:

- Have an open dialogue about risky behaviors online.
- Insist on employing privacy settings and software.
- Create a set of rules, limits and expectations for online behavior.
- Position use as a privilege, not a given, and a privilege over which parents have the ultimate authority.
- Consider taking possession of cellphones, computers, video games and all other online tools at night, at which time all tools are checked daily.
- Keep computers in a public area of the home.
- “Friend” kids online and follow their updates daily (but don’t embarrass your kids by commenting online).

### ▶ **Start early and stay involved.**

Like many parenting skills, monitoring your children’s online activities is easiest when you establish policies and expectations early. Although the tendency is for parents to become less involved as their children age, even older teens need their parents’ help to stay alcohol-free.

### ▶ **Stay connected. Keep your kids safe.**

Responsible parenting means staying aware of their friends, activities and influences throughout their lives. Social networking gives parents even greater power to live in their child’s world and to protect them from it, if needed.



### BY THE NUMBERS

Kids spend, on average, nearly 7 hours a day with “new media,” taking away time with family, sports, rest and other extracurricular activities.\* According to the Kaiser Study, today’s 8- to 18-year-olds spend an average of an hour-and-a-half daily using the computer outside of school work—50% more than just five years ago. Add to this an increase in cell phone usage (up 27%), and today’s youth are connected, engaged and distracted beyond their parents’ wildest dreams (or fears).

\*Kaiser Family Foundation, Generation M2, 2010

### Tools for the computer:

#### Trend Micro

Subscription-based, comprehensive parental controls, social network monitoring and Internet filtering.

#### SocialShield

Cloud-based service that allows parents to monitor their kid’s use of social networks.

#### GoGo Stat Parental Guidance

New free Facebook application that monitors online activity.

#### McAfee Family Protection

Provides parental controls to protect children from social networking risks, cyberbullying and other online threats.

LEARN  
MORE AT:

**PARENTS  
EMPOWERED.org**

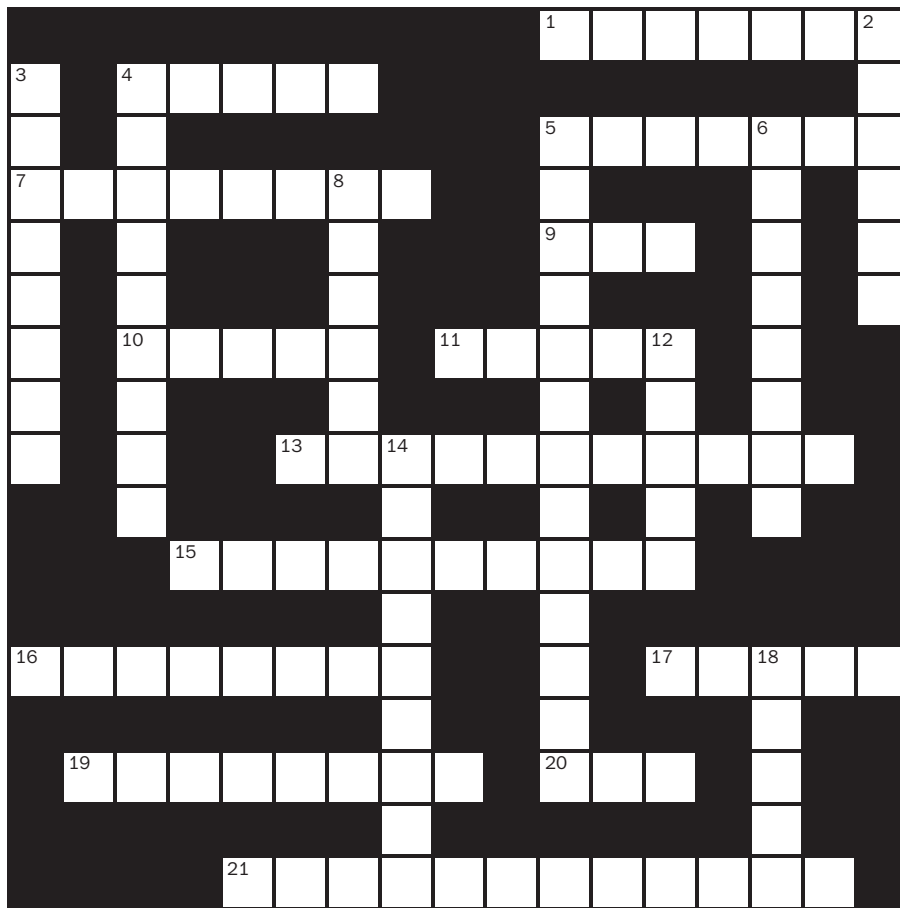
Eliminating Underage Drinking in Utah





# Alcohol

## and the developing brain



Solve this puzzle after reading the fact sheets found at [ParentsEmpowered.org](http://ParentsEmpowered.org)

### Crossword clues

#### ACROSS

- 1 Can harm mind and body of growing teen
- 4 Be smart, don't \_\_\_\_\_
- 5 Makes strong bones
- 7 Drinking alcohol may damage \_\_\_\_\_ ability
- 9 One of most trusted
- 10 Breaks down alcohol
- 11 More susceptible to alcohol damage
- 13 Hazardous state
- 15 Alcohol is a \_\_\_\_\_
- 16 A frontal lobe responsibility
- 17 Alcohol may damage frontal \_\_\_\_\_ forever
- 19 Refusal skill #1 = Ask \_\_\_\_\_
- 20 Most youth do \_\_\_\_\_ drink
- 21 Refusal skill #4 = Suggest \_\_\_\_\_

#### DOWN

- 2 Brain area
- 3 Smart media use is media \_\_\_\_\_
- 4 Alcohol is not a \_\_\_\_\_
- 5 Establish and maintain with children
- 6 Get \_\_\_\_\_ in child's life
- 8 Brain cell
- 12 Slows with alcohol
- 14 Age of legal alcohol use
- 18 Five or more drinks at a time

#### WORDS USED IN THIS PUZZLE

##### 3-LETTER WORDS:

mom  
not

##### 5-LETTER WORDS:

binge  
heart  
liver  
lobes  
start  
youth

##### 6-LETTER WORDS:

limbic  
neuron

##### 7-LETTER WORDS:

alcohol  
calcium

##### 8-LETTER WORDS:

involved  
judgment  
literacy  
question  
thinking

##### 9-LETTER WORDS:

stimulant  
twenty-one

##### 10-LETTER WORD:

depressant

##### 11-LETTER WORD:

intoxicated

##### 12-LETTER WORD:

alternatives

##### 13-LETTER WORD:

communication

#### ANSWERS

**ACROSS** 1: alcohol, 4: start, 5: calcium, 7: thinking, 9: liver, 11: youth, 13: intoxicated, 15: depressant, 16: judgment, 17: lobes, 19: question, 20: not, 21: alternatives  
**DOWN** 2: limbic, 3: literacy, 4: stimulant, 5: communication, 6: involved, 8: neuron, 12: heart, 14: twenty-one, 18: binge

#### CREDITS

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YOU ONCE  
WORRIED ABOUT HIM  
EVERY SECOND.



DON'T STOP NOW

New research shows that underage drinking can cause permanent brain damage. Research also shows that in Utah, parental involvement drops by 50% between the 6th and 12th grades. He might not show it much, but he's still your little buddy. Be there for him.

**PARENTS  
EMPOWERED.org**  
Eliminating Underage Drinking in Utah

Sponsored by The Utah Department of Alcoholic Beverage Control and Utah Prevention